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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,399	07/29/2003	Roger A. Allaire	SP03-098	7237

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CORNING INCORPORATED

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CORNING, NY 14831

EXAMINER

SHAKERI, HADI

ART UNIT

PAPER NUMBER

3723

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,399

Applicant(s)

ALLAIRE ET AL.

Examiner

Hadi Shakeri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 14-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-13 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 021405.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 1-14) in the reply filed on 04/08/05 is acknowledged. The traversal is on the ground(s) that the proposed inventions are inextricably intertwined and that a comprehensive search regarding anyone of the groups would inherently include pertinent filed and classes of prior art relating to both groups and that the questions of patentability would be substantially based on similar issues. This is not found persuasive because as was indicated in the previous office action and per MPEP § 806.05 (e) restriction is proper where the method can be practice by other apparatus. Applicant does not argue that the method cannot be practiced by different apparatus, the argument that the method claim includes some of elements, e.g., support member and grinding wheel, does not remedy the distinction made in the restriction, i.e., the apparatus requiring a grinding unit, or a driving motor coupled to the support platform. Further the search for method and/or the apparatus, while in most cases overlap, are not necessarily the same. The search for a specific structure and/or a step in method claim requiring particular element, would not be required for the other group not reciting the limitation, as is the case with the instant application.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

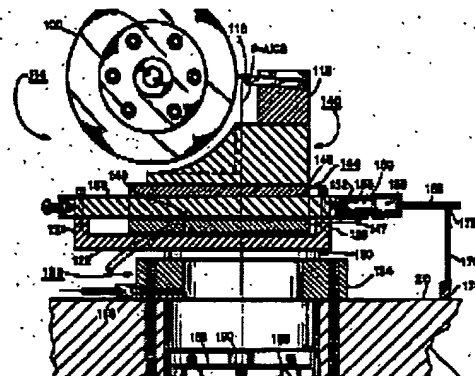
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 1-3, 5, 8 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lange et al. (4,493,166).

Lange et al. discloses all of the limitations of claim 1, i.e., an apparatus comprising an air bearing support member configured to pivot about an axis (05:50-59), and a grinding unit couple to the air bearing member (Abstract), meeting all the limitations of claims 2, 3, 5 and 8.



Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lange et al.

Lange et al. meets all of the limitations of the above claims, except for different grits of the grinding wheel, and the applied pressure. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Lange et al. by using the specific grinding wheel and/or pressure applied, to accommodate the work-piece and/or operational parameters.

6. Claims 1, 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Sakurai et al. (4,667,443) or Stock et al. (6,099,385) in view of either Lougher et al. (6,409,580) or Duescher (6,769,969).

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Either Sakurai et al. or Stock et al. meets all of the limitations of claims, 1 and 14, except for disclosing an air bearing support member. Air bearing or other type of "gimballing" type support allowing pivotal movement of the shaft coupled to a grinding unit are known in the art as evident by Lougher et al., e.g., col. 7, lines 31-35. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of either Sakurai et al. or Stock et al. by providing a gimballing type connection for the rotary shaft supporting the grinding wheel as taught by Lougher et al. or Duescher to adapt the tool for ease of operation for the pivotal movement along the edge.

Regarding claim 13, prior art (Sakurai/Stock in view of Lougher/Duescher) meets the limitations.

7. Claims 11, 12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art as applied to claim 1 above, and further in view of Clark et al. (6,428,390).

Prior art (Sakurai/Stock in view of Lougher/Duescher) as applied to claims 1 and 14 meets the limitations of the above claims, except for disclosing a suction type conveyor belt to fee the work. Workpiece transfer system comprising conveyors comprising vacuum chuck are known in the art as evident by Clark et al. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the modified invention of prior art with workpiece transport means as taught by Clark et al. as an efficient means of transferring and securing the workpiece during the operation. Regarding the coolant, Sakurai et al. discloses cooling the workpiece during operation, as it is well known in the art and modifying Stock et al. with coolant means would be well within the knowledge of one of ordinary skill in the art to enhance the operation.

Allowable Subject Matter

8. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Response to Arguments

10. Applicant's arguments filed 12/23/04 have been fully considered but they are not persuasive.

The argument regarding Lange that, there is no direct force normal to the edge of the substrate, rather through a cam follower, is not persuasive, because the grinding unit as recited in claim 1, does not exclude a cam follower, i.e., a grinding unit as disclosed by Lange, which includes the cam follower applies force directly to a workpiece.

In response to applicant's argument that the claimed apparatus is intended to control the position of the grinding unit using a predetermined force, a recitation of the intended use of the

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claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

The argument that the predetermined force is not applied to an edge but rather to the external guiding mechanism is not persuasive, since the force applied by the grinding wheel (110, part of the grinding unit) to the workpiece (118) meets the limitation as recited.

The arguments regarding dependent claims, that modifying operational parameters, e.g., different grits for the grinding wheel, applied pressure...is not persuasive, since chaining these factors depending on the application and/or workpiece to achieve optimum results are considered within the knowledge of one of ordinary skill in the art.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Both Sakurai et al. and Stock et al. disclose apparatus for grinding edges meeting the structural limitations of the claims 1, 2 and 11, except for using an air bearing in providing smooth operation for the pivotal joint (61, at ears 64, respectively). The use of air bearing for reducing friction and providing smooth pivotal operation is taught by the teaching references, Lougher et al. and/or Duescher and combination of either Sakurai or Stoke with either Lougher or Duescher meets all the claims limitations. The argument that this combination would teach away from Applicant's claimed invention does not indicate what claim limitations are not met.


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11. Prior art made of record and not relied upon are considered pertinent to applicant's disclosure. Shin et al., Hasegawa et al., Bando, and Kozai et al. are cited to show related inventions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is 703-308-6279. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail, III can be reached on 703-308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hadi Shakeri
Primary Examiner
Art Unit 3723
June 24, 2005